



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,171	09/03/2003	Hiroshi Ushimaru	9281/4665	4329

7590 04/26/2005

Anthony P. Curtis, Ph.D.
BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER

GARCIA, ERNESTO

ART UNIT	PAPER NUMBER
----------	--------------

3679

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/654,171

Applicant(s)

USHIMARU, HIROSHI

Examiner

Ernesto Garcia

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-14, 18, 19, 21-24, 26 and 28 is/are rejected.
- 7) ☒ Claim(s) 15-17, 20, 25 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The indicated allowability of claim 12 in the last Office action is withdrawn in view of the newly discovered reference to Muller, 5,361,924. A 35 USC 103 rejection based on the newly cited reference follows below.

Claim Objections

Claims 10 and 28 are objected to because of the following informality:

regarding claim 10 and 28, "for knobs" in line 1 should be deleted as the fitting structure is actually the knob along with other components and not for the knob. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 10, 11, 13, 14, 18, 19, and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Rogers, 2001/0025545 A1, (see marked-up attachment provided in Office action mailed on April 22, 2004.

Regarding claim 10, Rogers discloses, in Figure 1, a fitting structure comprising a fitting member **12**, a shaft member (not shown but a screw is to be screwed into bore **22**), and a knob **14**. The fitting member **12** is fitted to the shaft member. The knob **14** is arranged concentrically with the fitting member **12** and fitted to a front face **A4** of the fitting member **12**. The fitting member **12** has a base **A5**, arcwise guides **24**, gaps **A8**, and guide faces **A9**. The guides **24** protrude forward from the base **A5** and are provided on a first circle **A7**. Each of the gaps **A8** is provided between adjacent guides **24**. Each of the guide faces **A9** is provided at a top **A10** of one of the guides **24** and inclined relative to the base **A5**. The knob **14** has projections **36** positioned corresponding to the first circle **A7**.

Applicant is reminded that the knob or the fitting member can be rotated to enable the projections to approach the base, and after the projections are positioned in the gaps, the knob and the fitting member are enabled to be coupled to each other. Furthermore, the gaps will retain the projections.

Regarding claim 11, the projections **36** are held between adjacent guides **24**.

Art Unit: 3679

Regarding claim 13, the projections **36** are arranged to form a cross [in a cross].

Regarding claim 14, the guide faces **A9**, inclined in an equal direction relative to the base **A5**, are formed at the top **A10** of the guides **24**.

Regarding claim 18, the base **A5** has a front wall **A12** and a cylindrical sidewall **A13** extending backward from a circumference **A14** of the front wall **A12**. The front wall **A12** is provided with the guides **24** protruding forward. The knob **14** has a front wall **A15** and a cylindrical sidewall **A16** extending backward from a circumference **A17** of the front wall **A15** of the knob **14**. The front wall **A15** of the knob **14** is fitted with the projections **36** protruding backward in a state of being positioned in the sidewall **A16** of the base **A5**. The sidewall **A13** of the base **A5** is positioned within the sidewall **A16** of the knob **14**.

Regarding claim 19, the fitting structure is further provided with a rotation drive member **20** of which the shaft member (note, the screw is to be fitted in hole **22**) is rotatable. The fitting member rotates together with the shaft member when the knob is fitted.

Regarding claim 28, Rogers discloses, in Figure 1, a fitting structure comprising a fitting member **12**, a shaft member (not shown but a screw is to be screwed into bore **22**), and a knob **14**. The fitting member **12** is fitted to the shaft member. The fitting

Art Unit: 3679

member **12** has a base **A5**, arcwise guides **24** and gaps **A8**. The guides **24** protrude forward from the base **A5** and are provided on a first circle **A7**. The guides **24** have top faces **A9**. At least one of the top faces **A9** is inclined relative to the base **A5**. Each end of the top faces **A9** is spaced forward from the base **A5** such that gaps **A8** are provided between adjacent guides **24**. The knob **14** is arranged concentrically with the fitting member **12**. The knob **14** has projections **36** positioned corresponding to the first circle **A7**.

Applicant is reminded that the knob or the fitting member can be rotated to enable the projections to approach the base, and after the projections are positioned in the gaps, the knob and the fitting member are enabled to be coupled to each other. Furthermore, the gaps will retain the projections since the projections are positioned in the gaps **A8**.

Claims 10, 21-24 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Hecht, 6,276,879.

Regarding claim 10, Rogers discloses, in Figure 1, a fitting structure comprising a fitting member **2**, a shaft member (not shown but the fitting member is fitted to a chuck which has the shaft member), and a knob **1**. The fitting member **2** is fitted to the shaft member. The knob **1** is arranged concentrically with the fitting member **2** and fitted to a front face **30** of the fitting member **2**. The fitting member **2** has a base **34**, arcwise

Art Unit: 3679

guides **42**, gaps **46**, and guide faces **40**. The guides **42** protrude forward from the base **34** and are provided on a first circle. Each of the gaps **46** is provided between adjacent guides **42**. Each of the guide faces **40** is provided at a top of one of the guides **42** and inclined relative to the base **34**. The knob **1** has projections **36** positioned corresponding to the first circle. The knob or the fitting member can be rotated to enable the projections to approach the base, and after the projections are positioned in the gaps, the knob and the fitting member are enabled to be coupled to each other.

Regarding claim 21, the knob **1** and the fitting member **2** are coupled to each other using an engaging means **24,36**.

Regarding claim 22, the engaging means **24,36** is formed at a different position than the guides **42**.

Regarding claims 23 and 24, the engaging means **24,36** is formed at a different position than the projections **36**.

Regarding claim 26, the projections **36** are different shapes than the guides **42**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers, 2001/0025545 A1, (see marked-up attachment provided in Office action mailed on April 22, 2004), in view of Muller, 5,361,924.

Regarding claim 12, Rogers, as discussed above, fails to disclose the fitting member **2** provided with through holes bored in the base positioned between the gaps, and the projections **36** being fitted into the through holes. Muller teaches, in Figure 7, through holes **60** bored in a base **36** positioned between gaps (gap is created by ramp 84), and projections 56 fitted into the through holes 60 to provide a retention mechanism between a base and a knob (col. 2, lines 45-60). Therefore, as taught by Muller, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide through holes bored in the base, position holes between gaps, and fit the projections into the through holes to provide a retention mechanism between the base and the knob.

Response to Arguments

Applicant's arguments filed December 7, 2004 have been fully considered but they are not persuasive.

Applicant has argued that the feature A8 indicated on the marked-up drawing of Figure 1 of Rogers is the same feature as 24 in the published drawing. In response, the examiner differs. It is true that feature 24 represents the ratchet tooth; however, the examiner is not showing the same feature but instead the area of void that is present between the teeth. Furthermore, applicant has concurred by indicating that the inclined plane of the tooth fills the space (see discussion on page 7, in line 7, which the examiner has indicated at A8 on the marked-up drawing). This same space is what the examiner refers to the gap. More over, the examiner also did not intend to show the vertical wall with reference A8 as applicant has indicated in lines 9 and 11.

In regards to Hecht, applicant has argued that Hecht does not teach the gaps retaining the projections by relying on Hecht's operation of the invention being distinct than the arrangement recited in applicant's claim. Applicant is reminded that the method of operating the fitting structure has no relevance on the patentability of the structural limitations of the claimed invention. Furthermore, applicant has not indicated or proven what features or impossibilities prevent the projections from being retained in

Art Unit: 3679

the gaps indicated in Hecht, when in fact the gaps retain the projections in Hecht's invention.

Allowable Subject Matter

Claims 15-17, 20, 25 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

regarding claim 15, the prior art of record does not disclose or suggest a fitting structure comprising an annular fitting portion on a second circle of a base of a fitting member;

regarding claim 16, the prior art of record does not disclose or suggest a fitting structure comprising a knob having keep pieces arranged corresponding to a second circle;

regarding claim 17, this claim depends from claim 15;

regarding claim 20, the prior art of record does not disclose or suggest a fitting structure comprising a rotation drive member comprising a motor. There is no reason to make the rotation drive member 20 of Rogers into a motor as there is no motivation;

regarding claim 25, the prior art of record does not disclose or suggest a fitting structure comprising a knob and a fitting member coupled to each other using engaging means comprising hooks and fitting portions; and,

regarding claim 27, the prior art of record does not disclose or suggest a fitting structure comprising projections of a knob having a number of the projections different than guides of a fitting member.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 703-272-7083. The examiner can normally be reached from 9:30-5:30. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 703-308-2686. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 3679

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

E.G.

E.G.

April 18, 2005

A handwritten signature in black ink that reads "Daniel P. Stodola". The signature is written in a cursive style with a large initial 'D'.

DANIEL P. STODOLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600